

# International Islamic University Chittagong

Kumira, Sitakunda, Chattogram-4318

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Website: iiuc.ac.bd

Date: 04 August 2019

## Re-TENDER NOTICE

Sealed quotations are hereby invited from the genuine firms/suppliers for supplying equipments, devices & accessories for **Civil Engineering Department Laboratory** with the following terms and conditions:

1. Participant firms/suppliers are advised to quote the rate in their official pad. **Equipments, devices & accessories for Civil Engineering Department Laboratory** must be mentioned on the Envelop.
2. Tender Schedule & details of required items are available at Purchase & Procurement Division (PPD), IIUC and it may also be downloaded from the web site ([www.iiuc.ac.bd](http://www.iiuc.ac.bd)).
3. Quotations are to be dropped **on or before 21 August 2019 before 11.00 am** in the tender box kept in the office of the Chairman, Purchase & Procurement Committee, Kumira, Sitakunda, Chattogram. Tender Box shall be opened on the same day in presence of participants or their representatives (if any).
4. The authority of IIUC preserves the right to accept or reject all quotations either partly or in full and is not bound to accept the lowest quotation without giving any reason what's ever.
5. Suppliers shall have to deliver the goods by their own cost/arrangement to the specified place.
6. The selected party must be submitted 2.5% earnest money within 7 (Seven) days after receiving work order by Bank Draft/Pay Order favoring IIUC from IBBL or any scheduled bank & the Bank Draft/Pay Order will be released to the party after successful delivery.
7. Bill may be paid after taking delivery, deducting VAT/AIT as per government rules & performing other official formalities. If any default is found, payment will be suspended till the defaults are removed.
8. For any details or clarifications interested bidder may contact with Engr. Md. Iftekharul Alam, Sub-Assistant Engineer, P&DD, IIUC (Cell: 01837-380058) and Mr. Hasanul Banna, Senior Assistant Director, PPD, IIUC (Cell: 01872-031031) positively.

*Mahmudul Alam* 04.08.2019

**Mahmudul Alam**

Deputy Director

Purchase & Procurement Division (PPD)

International Islamic University Chittagong

## Conditions during submissions of quotations regarding Civil Engineering Department

- Rate could be put as unit basis
- Origin of the machine, devices, and tools should be mention individually with rate.
- Capacity of the machine, devices, and tools should be point out.
- If any data missing on experiment can be include before put the quotation.
- Mention the delivery time of quoted items
- Seeking any information's relevant this issue please contact with following those persons

1. Engr. Md. Iftekharul Alam , IIUC  
01837, 380 058  
Email- iftekhar01813@gmail.com
2. Mr. Hasanul Banna,  
AD, IIUC  
01872 031 031  
Email- bannactgbd@gmail.com

### CE-1104- Carpentry, Welding and Iron Shop Sessional

SL No	Name of the Experiment	Equipment's Required	Required Quantity	State or Remark	Total cost
1	Introduction with workshop devices and tools	Woodshop Machine			
		Carpentry Power tools			
		Carpentry Hand tools			
		Iron shop Machine Lath and Bench Drill, Bench Grinder			
		Iron shop hand tools			
		Gas welding Machine			
		Gas welding hand tools and accessories			
		Electric Arc welding machine			
		Electric Arc welding hand tools and accessories			
		Mallet			
2	To join the given two work pieces as a lap joint by arc welding.	Welding power supply			
		Flat file			
		Welding rod			
		Chipping hammer			
		Electrode holder			
		Wire brush			
		Gloves and apron			
		Earthing clamps			
		Shield and goggles			
		chisel grinder			
		steel rule			
		try square			
3	To prepare the job as per the specifications provided to apply Cutting, Facing, center drilling, Plain turning, Taper turning, Necking, Knurling, Threading, chamfering, Filing Oiling	Engr. Steel Rule 6"			
		Outside caliper			
		Vernier calipers			
		Flat smooth file			
		Single point cutting tool			
		Knurling tool			
		Center drill			
		Drill chuck ½"			

		Spanner set			
		Parting off or necking tool			
		Thread gauge			
		Threading tool			
		Parting tool			
		Lathe Dog carrier etc			
		Mild steel Bar (40 mm dia.)			
4	To make a dovetail lap joint.	Steel rule			
		Try square			
		Marking guage			
		Rip saw			
		Tenon saw			
		Mortise chise			
		Mallet			
		Jack plane			
		Wood rasp file			
5	To make a cross half lap joint	Steel rule			
		Try square			
		Marking guage			
		Rip saw			
		Tenon saw			
		Mortise chisel			
		Mallet			
		Jack plane			
		Wood rasp file			
6	To make a Lap joint, using the given two M.S pieces and by arc welding.	Rough and smooth files			
		Protractor			
		Arc welding machine (transformer type			
		Mild steel electrode			
		Electrode holder			
		Ground clamp			
		Tongs			
		Face shield			
		Apron			
		Chipping hammer			
		M.S electrodes 3.1 mm X350 mm			

		Mild steel plate of size 100X50X5 mm – 2 No's			
		Air cooled transformer			
		Voltage-80 to 600 V			
		3- $\phi$ supply, Current up to 350Amps			
7	To make a corner joint, using the given two M.S pieces and by arc welding.	Rough and smooth files			
		Protractor			
		Arc welding machine (transformer type)			
		Mild steel electrode and electrode holder			
		Ground clamp			
		Mild steel electrode and electrode holder			
		Face shield			
		Tongs			
		Apron			
		Chipping hammer			
		Cabinet & almirah as required			

**CE-1206 Concrete Sessional  
Concrete Laboratory**

SL No	Name of the Experiment	Equipments Required	Available Quantity	Required Quantity	State or Remark	Amount
1	Determination of Normal Consistency Of Cement with Vicat's Apparatus	Vicat apparatus with plunger				
		Three Glass Graduate				
		Balance				
		Mixing Plate				
		Trowel				
		Scoop				
		Thermometer				
		Hand gloves				
		Stopwatch				
		Measuring jar.				
2.	Determination of Initial and final Setting Time of Cement	Vicat's apparatus with needle				
		Three Glass Graduate				
		Balance				
		Mixing Plate				
		Trowel				
		Scoop				
		Thermometer				
		Hand gloves				
		Stop watch				
		100ml measuring jar				
3	Soundness and fineness test of cement					
4.	Test for Direct tensile and Compressive Strength of Cement Mortar	Balance				
		Graduated Measuring Jar				
		Cube mold of size 7.07x7.07x7.07 cm with base plates.				
		Mixing Pans				
		Tamper				
		Trowels				
		Testing Machine				
		Cement sample, water and standard sand.				

		Weighing balance accurate up to 0.1 gm				
5.	Gradation of Fine and Coarse Aggregate	Indian standard test sieves set,				
		Weighting balance,				
		Mechanical Sieve Shaker				
		Tray.				
6	Specific Gravity and Absorption Capacity of Fine Aggregate	Balance				
		Pycnometer				
		250ml measuring cylinder,				
		Oven				

7	Specific Gravity and Absorption Capacity of Coarse Aggregate	Balance				
		Sample Container				
		Water Tank				
		Pycnometer,				
8	Unit Weight and Voids in Aggregate	Balance				
		Tamping Rod				
		Measure				
		Calibration Equipment				
		Ovan				
9	Sampling and Testing of Brick for Compressive Strength, unit weight, efflorescence and Absorption	Compressive Testing Machine				
		Mechanical Cutter				
10	Design and testing of a concrete mix design	Cylinder				
		Mixer machine				
		Tamping Road				
		Big Balance				
		Slum Cone				
11		Cabinet & Almirah as required				

**International Islamic University Chittagong**

**1. CE-1100: Civil engineering drawing and digital drafting  
Engineering Drawing Laboratory**

SL No.	Name of the Experiment	Equipment's Required	Available Quantity	Required Quantity	Unit price	Total cost
1	Introduction and Familiarization of Drawing Instrument.	Laptop for class				
		Projector				
		Drawing Table				
2.	Line, Dimensioning, Scale of drawing and Plane Geometry.	Laptop for class				
		Projector				
		Drawing Table				
3.	Orthographic Views (Free Hand Drawing).	Laptop for class				
		Projector				
		Drawing Table				
4.	Orthographic Views (With Dimension).					
5	Missing line, Auxiliary view, Pictorial view and Sectional view.					
6	Isometric Drawing					
7	Laws and regulations					
8	Study On CAD Drawing.	Computer/ Computer lab				
		Auto Cad Software				
9	Preliminary Planning of one-unit housing					
10	Preliminary studies about planning of Multistoried Apartment by using Auto CAD					
		Cabinet & Almirah as required				



**CE-2404: Fluid Mechanics**  
**Fluid Mechanics Laboratory**

SL No.	Name of the Experiment	Equipment's Required	Available Quantity	Required Quantity	State or Remark	Amount
1	Centre of Pressure	Rectangular Transparent water tank				
		Torroidal Quadrant of rectangular section				
		Water level measuring device				
2	Bernoulli's Theorem	Perspex venture of rectangular cross section				
		Perspex piezometers				
3	Flow through Venturimeter	Venturimeter				
4	Flow through an Orifice	Constant Head water tank				
		Orifice				
		Discharge measuring tank				
		Stop watch				
		Point Gauge				
5	Flow through an External Cylindrical Mouthpiece	Constant Head water tank				
		Mouth Piece				
		Discharge measuring tank				
		Stop watch				
		Point Gauge				
6	Flow over a Sharp Crested Rectangular Weir	A constant steady water supply				
		An approach channel				
		A rectangular weir plate				
		A flow measuring facility				
		A point gauge				
7	Flow Over a V-notch	A constant steady water supply				
		An approach channel				
		A V-notch weir plate				
		A flow measuring facility				
		A point gauge				
8	Fluid Friction in a Pipe	Pipe friction apparatus				
		Stop watch				
		Thermometer (100 C~1000C)				
		Discharge measuring facility				
9	C-4 Tilting Flume					
		Cabinet & almirah as required				

**CE-2408: Geotechnical Engineering Sessional -I**  
**Geotechnical Laboratory**

SL No	Name of the Experiment	Equipments Required	Required Quantity	State or	Total Amount
1	Field Identification Test/  Identification of Soils (Visual-Manual procedure)	Glass Cylinder/beaker			
		1/8 inch dia steel rod			
		Wooden Hammer			
		Spatula			
		Wash Bottle			
		Glass rod / Stirrer			
2	Determination of Specific Gravity	Volumetric Flask/ Pycnometer, Preferably 250-500ml			
		Vacuum Pump			
		Wooden hammer			
		Balance Weighting to 0.1gm			
		Heat Source			
		Desiccators			
		Thermometer			
		Moisture Can			
		Pipette			
				Distilled water	
		Drying oven			
		Medicine dropper,			
		Spoon etc			
3	Sieve Analysis	Set of Sieve			
		Balance with sensitivity 0.1gm			
		Rubber Mallet			
		Drying Oven			
		Desiccators			
		Brush			
		Large steel Pan with cover			
		Sieve Shaker			
		ASTM Sieve #4, #8, #16, #30, #50, #100, #200–Pan			
		Container			
		Bowel			
		Spoon			
4	Hydrometer Analysis	Hydrometer Jar/Sedimentation Cylinder,1000 cubic cm			
		Hydrometer(152H model preferable			
		Water bath			
		Measuring cylinder/Graduated jar			
		Can			

		Wash bottle			
		Thermometer			
		Soil Dispersion Device/Mechanical Mixture Mixing pot			
		Stop watch			
		Balance			
		Dispersion Agent			
		Wooden Hammer			
		Sodium hexa meta phosphate (NaPO3)			
5	Determination of Atterberg Limits	Liquid Limit Device with Grooving Tools			
		Moisture Can			
		Plastic Limit plate			
		Soil Mixing Equipment			
		Balance 0.01gm Sensitivity			
		Sieve, Pan &Lid			
		Desiccators			
		Watch Glass/Drying Cans			
		Moisture Can			
		Drying oven set at 105oC			
		Shrinkage/Petri Dish			
		Glass Plate with Three Prongs			
		Mercury Metal			
		Pipette			
Volume Dish					
		Spatula			
		Wash bottle filled with distilled			
		Flat grooving tool with gage			
6	Determination of Relative Density	Standard Compaction Mold with Collar /CBR Mold 0.01cft			
		Vibration Device			
		Balance			
		Pan			
		Funnel with Stopper			
		Spoon			
		Vibrating Table			
		guide sleeves			
		surcharge base-plate			
		surcharge weights			
		Scoop			
		Straightedge.			
7	Compaction Test/Field Density	Hammer - 5lb			
		Hammer – 10lb			
		Mold			
		Extruder			

	Test	Balance			
		Drying oven			
		Mixing pan			
		Trowel			
		#4 sieve			
		Moisture cans			
		Graduated cylinder			
		Straight Edge			
8	Constant Head Permeability Test	Permeability Device/Permeator with Ring Stand, Tube Clamp & Burette Standpipe			
		Stop watch			
		Thermometer			
		Measuring cylinder (capacity 1L)			
		Scale (Steel tape)			
		Filter Paper			
09	Direct Shear Test	Direct Shear Device with 0.01 mm dial gages/ Load and deformation dial gauges			
		Calipers			
		Small Level			
		Temper			
		Balance			
		Drying Oven			
		Timer			
		Straight Edge			
		Wire Saw			
		Knife			
		Spoon			
10	Unconfined Compression Test	Unconfined Compression Device with Dial gages 0.01mm/dev (Load and deformation dial gauges)			
		Specimen Trimmer with Accessories a) Meter Box b) Wire Saw c) knives			
		Remolded cylinder & plunger			
		Membrane for Remolding			
		Drying Oven			
		Desiccators			
		Moisture Can			
		Scale			
		Protector			
		Spatula			
		Evaporating Dishes/Moisture Can			
		Wax paper			

		Balance			
11	Consolidation Test	Consolidation device (including ring, porous stones and load plate)			
		Dial gauge (0.0001 inch = 1.0 on dial)			
		Sample trimming device			
		Glass plate			
		Metal straight edge			
		Clock			
		Moisture can			
		Filter paper			
12	Test of Geotextiles				
		<b>Cabinet &amp; Almirah as required</b>			

**CE-2304- Mechanics of Solids-1**  
**Strength of Mechanics Laboratory**

SL No	Name of the Experiment	Equipments Required	Available Quantity	Required Quantity	State or Remark	Amount
1	Tension Test	A UTM				
		Mild steel specimen				
		Vernier caliper/micrometer				
		dial gauge &				
		Graph paper.				
2.	Bending Test of Cantilever Beam	UTM or Beam apparatus				
		Bending fixture				
		Vernier caliper				
		meter rod				
		Test piece.				
		Dial gauge				
3.	Direct Shear Test	A UTM				
		Specimen				
		Shearing attachment				
		Vernier caliper etc				
4.	Torsion Test	A torsion testing machine				
		Twist meter for measuring angles of twist				
		A steel rule and Vernier Caliper or micrometer				
5	Rockwell Hardness	Rockwell Hardness testing machine,				
		Specimen of mild steel or other material.				
6	Compression Test of Timber and Concrete Specimen	A UTM or A compression testing m/c				
		Cylindrical or cube shaped specimen of cast iron,				
		Aluminum or mild steel				
		vernier caliper				

		liner scale				
		Dial gauge (or compress meter).				
7	Impact Test (IZOD)	Impact testing m/c,				
		Izod test specimens of mild steel				
		Aluminium, Vernier caliper				
		Specimen setting fixture				
		Specimen setting fixture				
8	Helical Spring Test	Spring testing machine.				
		A spring				
		Vernier Caliper, Scale				
		Micrometer				
9	Hardness Test	Hardness tester,				
		Soft and hard mild steel specimens,				
		Brass,				
		Aluminum etc				
		Cabinet & Almirah as required				

**CE-1208: Practical Surveying**  
**Surveying Laboratory**

SL No.	Name of the Experiment	Equipments Required	Available Quantity	Required Quantity	State or Remark	Total Amount
1	Practice of Handling of Instrument					
2	Chain Survey	Engineering Chain				
		Optical Square				
		Tape (ft)				
		Plumb Bob				
		Ranging Rod				
		Trough Compass				
		Bamboo Peg (3 ft length)				
3	Plane Table Survey	Alidad Scale				
		Plane Table				
		Tripod Stand				
		Plumb Bob				
		Sprit Level				
		Tape				
4.	Theodolite Survey	Theodolite				
		Tape				
		Plumb Bob				
		Levelling Staff				
		Rope				
5.	Leveling	Leveling Machine				
		Leveling Staff				
		Plumb Bob				
		Tape				
6	House Setting	Tape				
		Peg				
		Bamboo				
		Rope				
		Plumb Bob				
7	Contouring	Theodolite				
		Bamboo Peg (3 ft length)				
		Plumb Bob				
		Rope				
8	Tachometry	Tachometer				
		Ranging Rod				
		Prismatic Campus				
		Arrows				



		<b>Peg</b>				
<b>9</b>	<b>Curve Setting</b>	<b>Theodolite</b>				
		<b>Bamboo Peg (3 ft length)</b>				
		<b>Plumb Bob</b>				
		<b>Charge</b>				
		<b>Ranging Rod</b>				
		<b>Trough Compass</b>				
		<b>Tape</b>				
<b>10</b>	<b>Hight and Distance Problem</b>	<b>Theodolite</b>				
		<b>Leveling Staff</b>				
		<b>Trough Compass</b>				
		<b>Tape</b>				
		<b>Rope</b>				
		Cabinet & Almirah as required				